



BILLING CODE 3510-DS-P

DEPARTMENT OF COMMERCE

International Trade Administration

University of Minnesota, et al.;

Notice of Decision on Application

for Duty-Free Entry of Scientific Instruments

This is a decision pursuant to Section 6(c) of the Educational, Scientific, and Cultural Materials Importation Act of 1966 (Pub. L. 89-651, as amended by Pub. L. 106-36; 80 Stat. 897; 15 CFR part 301). Related records can be viewed between 8:30 A.M. and 5:00 P.M. in Room 3720, U.S. Department of Commerce, 14th and Constitution Ave, NW, Washington, D.C.

Docket Number: 15-041. Applicant: University of Minnesota, Minneapolis, MN 55455-0149. Instrument: IVVI Measuring System with Modules. Manufacturer: Delft University of Technology, the Netherlands. Intended Use: See notice at 80 FR 65984-85, October 28, 2015. Comments: None received. Decision: Approved. We know of no instruments of equivalent scientific value to the foreign

instruments described below, for such purposes as this is intended to be used, that was being manufactured in the United States at the time of order. Reasons: The instrument will be used to uncover novel quantum properties of certain semiconductors or superconductors, such as InAs, GaSb or devices combining these with superconductors such as Al and Nb, using high-sensitivity electronic current and voltage measurements. Unique properties of this instrument include modular integration of pA sensitivity ammeter, required to measure very small electrical currents down to several pA, low-noise transimpedance amplifier, required to transform the electrical currents into voltage signals of a few mV that can be measured with conventional laboratory voltmeters, and low-noise digital-to-analogue converter and signal switchboxes. The entire setup is battery-operated and is programmable via an optically-decoupled input to minimize electrical noise interference from electrical power lines or other instruments.

Docket Number: 15-042. Applicant: Purdue University, West Lafayette, IN 47907. Instrument: SuperK EXTREME EXR-20 20 MHz with SuperK VARIA High 50dB with Power Lock.

Manufacturer: NKT Photonics, Denmark. Intended Use: See notice at 80 FR 65984-85, October 28, 2015. Comments: None received. Decision: Approved. We know of no instruments of equivalent scientific value to the foreign instruments described below, for such purposes as this is intended to be used, that was being manufactured in the United States at the time of order. Reasons: The instrument will be used to image tissue or tissue like materials with high optical scatter using Optical Diffusion Tomography (ODT), providing useful information for the study of biological and chemical processes. The instrument has a wide turning range, which is important for exciting different fluorophores of interest, providing specificity to chemical processes, a short pulse width which is important for performing time-gated measurements, high laser power which is important for obtaining a high SNR from laser light traveling through centimeters of tissue or related scattering medium, and a 20MHz repetition rate which is important for time-gated measurements given the temporal response time of tissue.

Docket Number: 15-045. Applicant: University of

Massachusetts Medical School, Worcester, MA 01655.

Instrument: Vitrobot. Manufacturer: FEI Electron Optics, B.V., the Netherlands. Intended Use: See notice at 80 FR 65984-85, October 28, 2015. Comments: None received.

Decision: Approved. We know of no instruments of equivalent scientific value to the foreign instruments described below, for such purposes as this is intended to be used, that was being manufactured in the United States at the time of order. Reasons: The instrument will be used to understand the three-dimensional structure of purified proteins and complexes at the atomic level, and how this is related to their function, by freezing them, then examining them in the frozen state in an electron microscope. The instrument can precisely control the humidity at any level, and can also control the temperature of the chamber, which is essential to freeze the proteins and complexes under exactly defined conditions, which is a requirement for all of the studies. The specimen remains in the humidity-controlled environment until the instant of freezing, which is essential to prevent any evaporation of water from the specimen before freezing.

Docket Number: 15-050. Applicant: Rutgers University, Brunswick, NJ 08901. Instrument: Junior Micromanipulator unit with remote control system, shifting table and chamber unit parts. Manufacturer: Luigs & Neumann, Germany. Intended Use: See notice at 80 FR 79307-08, December 21, 2015. Comments: None received. Decision: Approved. We know of no instruments of equivalent scientific value to the foreign instruments described below, for such purposes as this is intended to be used, that was being manufactured in the United States at the time of order. Reasons: The instrument will be used to simultaneously measure the microscopic electric signals generated from neurons, specifically the patch-clamp whole cell recordings from neurons, to identify specific alterations in synaptic transmission that leads to neuropsychiatric or neurological disorders. The instrument is a highly flexible, highly precise system, offering the highest mechanical resolution and smoothest movement because of its patented spindle nut system, which guarantees a unique and extraordinary stability for long term recordings. The step motor is decoupled preventing a thermal bridge from the motor to the machine and also prevents vibration during movement. The

experiments require high precision equipment to precisely determine the measurement of voltage in the mV range and current in the pA range.

Dated: February 2, 2016.

Gregory W. Campbell,
Director,
Subsidies Enforcement Office,
Enforcement and Compliance.

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